

WHAT IS CLAIMED IS:

1. A circuit device comprising:

a die pad on which a semiconductor element is mounted with a brazing material,

5 a bonding pad disposed in close vicinity to the die pad, and

plating films formed on a surface of the die pad and on a surface of the bonding pad, respectively,

10 wherein a second plating film is disposed apart from a first plating film on which the semiconductor element of the die pad is mounted.

2. The circuit device of Claim 1, wherein the second plating film prevents the brazing material from overflowing.

15 3. The circuit device of Claim 1, wherein the second plating film prevents the brazing material that has overflowed from the first plating film from flowing out by a space between the first and second plating films.

20 4. The circuit device of Claim 1, wherein convex portions are provided at both sides, respectively, of the first plating film.

5. The circuit device of Claim 1, wherein the brazing material is spread around the first plating film by causing the brazing material to flow from the convex portions.

6. The circuit device of Claim 4, wherein the semiconductor element is maintained in parallel by spreading the brazing material by the convex portions.

7. The circuit device of Claim 1, wherein the semiconductor 5 device is an IC chip.

8. The circuit device of Claim 1, wherein the semiconductor element is electrically connected to a desired bonding pad among the bonding pads through a fine metal wire.

9. A circuit device comprising:

10 a die pad on which a semiconductor element is mounted, a first bonding pad disposed in close vicinity to the die pad and electrically separated from the die pad, a second bonding pad disposed in close vicinity to the die pad and formed integrally with the die pad, and an insulating resin for sealing 15 the semiconductor element, the die pad, the first bonding pad, and the second bonding pad while exposing a back surface of the die pad, a back surface of the first bonding pad, and a back surface of the second bonding pad,

wherein the second bonding pad is connected to the die 20 pad through a wiring portion narrow in width.

10. The circuit device of Claim 9, wherein an area in which the second bonding pad is in contact with the insulating resin is increased by providing the wiring portion, so that joining

is strengthened between the bonding pad and the insulating resin.

11. The circuit device of Claim 9, wherein a plurality of the first bonding pads are disposed along opposite sides of 5 the die pad.

12. The circuit device of Claim 11, wherein a plurality of the second bonding pads are disposed along the opposite sides of the die pad.

13. The circuit device of Claim 9, wherein the semiconductor 10 element is electrically connected to a desired first bonding pad among the first bonding pads and to a desired second bonding pad among the second bonding pads through fine metal wires.

14. The circuit device of Claim 9, wherein the first bonding pad and the second bonding pad are formed circularly.

15. 15. A circuit device comprising:

a die pad on which a semiconductor element is mounted, bonding pads arranged to enclose the die pad, a first external electrode disposed on a back surface of the die pad, a second external electrode disposed on a back surface of the bonding 20 pad, and a resist that has openings at positions corresponding to the first and second external electrodes and that covers the back surfaces thereof,

wherein the opening of the resist formed at the position

corresponding to the second external electrode is formed larger than the bonding pad.

16. The circuit device of Claim 15, wherein a size of the second external electrode is restricted according to

5 wettability of the back surface of the bonding pad exposing from the opening and according to an amount of a brazing material, which is a material of the external electrode, applied onto the back surface of the bonding pad.

17. The circuit device of Claim 15, wherein the first external 10 electrode is restricted in position and in size according to the opening of the resist.

18. A circuit device manufacturing method comprising:

a step of preparing a conductive foil;

15 a step of forming die pads and bonding pads that constitute a plurality of circuit device portions by forming a separation groove in the conductive foil, the separation groove being smaller in thickness than the conductive foil;

20 a step of forming a first plating film on a surface of the die pad corresponding to an area of a semiconductor element to be fixed and, at the same time, forming a second plating film so as to enclose the area thereof;

a step of fixing the semiconductor element onto the first plating film with a brazing material;

a step of performing wire bonding between the semiconductor element and a desired conductive pattern;

5 a step of performing common molding by use of an insulating resin so that the semiconductor element is covered with the insulating resin and the separation groove is filled with the insulating resin;

a step of removing a back surface of the conductive foil until the insulating resin is exposed; and

10 a step of dicing the insulating resin so as to be separated into each circuit device.

19. The circuit device manufacturing method of Claim 18, wherein a convex portion is disposed at a periphery of the first plating film, and the semiconductor element is maintained in parallel by causing the brazing material to flow from the convex portion.

20. The circuit device manufacturing method of Claim 18, wherein the brazing material is prevented from flowing from the surface of the die pad by causing the brazing material to flow from the convex portion along the second plating film.

21. The circuit device manufacturing method of Claim 18, wherein the brazing material is solder or an Ag paste.

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